# Troy Annual Water Quality Report

## Troy Water - Drink it up!

Troy drinking water comes from the greatest freshwater supply in the world - the Great Lakes. Troy's water source is Lake Huron, which holds 850 cubic miles of water.

Troy purchases water from the Detroit Water and Sewerage Department (DWSD). Their system filters and treats the lake water at its plant in Port Huron before releasing it into the pipes that deliver Troy's water supply.

Troy maintains 500 miles of water main, over 5300 hydrants, six master meter facilities, and more than 26,000 water meters to serve our 85,000 residents, businesses and public facilities.

Troy residents consume approximately five billion gallons of water per year. Our goal is to provide a safe, healthy water supply with quality service to our customers.

For convenience, you may choose to use Direct Payment for your water bill. The City continues sending a billing statement, but payments are automatically deducted from your designated account on the due date. For information or an application form, contact the Treasurer's department at 248.524.3333. Direct Payment is a free service.

If you have any questions about this report or Troy water service, please contact the Department of Public Works at 248.524.3370.

## What's in our drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800.426.4791.

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and sometimes, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. **Contaminants** that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Organic Chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

*To ensure tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.*

*The State and EPA require us to test our water on a regular basis to ensure its safety. We met all monitoring and reporting requirements for 2002.*

*The City of Troy will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at City Hall (500 W Big Beaver), the Troy Community Center(3179 Livernois) and Troy Public Library (510 W Big Beaver). Copies may also be sent to you by calling 248.524.1147.*

## Health Information:

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk of infection. These people should seek advice about drinking water from their health care providers.

EPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available form the Safe Drinking Water Hotline (800.426.4791).

## Glossary of terms

Unregulated contaminants are those for which the Environmental Protection Agency (EPA) has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

**AL (Action Level)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which water system must follow.

**MCL (Maximum Contaminant Level)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**MRDLG (Maximum Residual Disinfectant Level Goal)** - The level of a drinking water disinfectant below which there is no known or expected risk to health. It does not reflect the benefits of the use of disinfectants to control microbial contaminants.

**MRDL (Maximum Residual Disinfectant Level)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MCLG (Maximum Contaminant Level Goal)** - The level of contaminant in drinking water below which there is no known expected risk to health.

**NTU (Nephelometric Turbidity Units)** - Turbidity is a measure of the cloudiness of the water.

**ppb (Parts per billion)** - One ppb is equivalent to one microgram per liter. A microgram = 1/1000 milligram.

**ppm (Parts per million)** - One ppm is equivalent to one milligram per liter. A milligram = 1/1000 gram.

**TT (Treatment Technique)** - A required process intended to reduce the level of a contaminant in drinking water.

**N/A -** Not applicable

**≥** - More than or equal to.

## Lake Huron Water Treatment Plant 2002 Regulated Detected Contaminants Table **(reported by the Detroit Water & Sewerage Department)**

| *Contaminant* | *Test Date* | *Units* | *Health Goal MCLG* | *Allowed Level MCL* | *Level Detected* | *Range Low/High* | *Violations* | *Major Sources in Drinking Water* |
|---|---|---|---|---|---|---|---|---|
| **Inorganic Chemicals - Annual Monitoring at Plant Finished Tap Water** | | | | | | | | |
| Fluoride | 8/21/02 | ppm | 4 | 4 | 1.1 | na/na | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| **Radioactive Contaminants - Plant Finished Water Tap** | | | | | | | | |
| Alpha emitters | 11/16/01 | pCi/l | 0 | 15 | 3.19 | na/na | No | Erosion of Natural Deposits |
| **Disinfectant Residuals and Disinfection By-products Quarterly Monitoring in Distribution System** | | | | | | | | |
| TTHM | 2/02-11/02 | ppb | na | 80 | 14.2 | 7.3-24.8 | No | By-product of drinking water chlorination |
| Haloacetic Acids (HAA5) | 02/02-11/02 | ppb | na | 60 | 12.3 | 2.0-17.0 | No | By-product of drinking water disinfection |
| Disinfectant (chlorine residual) | 01/02-12/02 | ppm | MDRGL 4 | MRDL 4 | .84 | .79-.92 | No | Water additive used to control microbes |

| **2002 Turbidity - Monitored every Four Hours at Plant Finished Water Tap** | | | |
|---|---|---|---|
| *Highest Single Measurement Cannot exceed 1 NTU* | *Lowest Monthly% of Samples Meeting Turbidity Limit of .3 NTU (minimum 95%)* | | *Major Sources in Drinking Water* |
| 0.25 NTU | 100% | No | Soil runoff |

*Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.*

| **2002 Microbial Contaminants - Monthly Monitoring in Distribution System** | | | | | |
|---|---|---|---|---|---|
| *Contaminant* | *MCLG* | *MCL* | *Highest No. Detected* | | *Major Sources in Drinking Water* |
| Total Coliform Bacteria | 0 | Presence of Coliform bacteria ≥ 5% of monthly samples | in 1 month - 0 | No | Naturally present in the environment |
| E. coli | 0 | A routine sample and repeat sample are total coliform positive, and one is also fecal or E. coli positive | entire year - 0 | No | Human waste & animal fecal waste |

| **Lead and Copper Monitoring at Customers' Tap** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Contaminant* | *Test Date* | *Units* | *Health Goal MCLG* | *Action Level AL* | *90th Percentile Value** | *# of Samples Over AL* | | *Major Sources in Drinking Water* |
| Lead | 2002 | ppb | 0.0 | 15 | 0 | 0 | No | Corrosion of household plumbing system; erosion of natural deposits |
| Copper | 2002 | ppm | 1.3 | 1.3 | 0 | 0 | No | Corrosion of household plumbing system; erosion of natural deposits; leaching from wood preservatives |

**The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value.*

| 2002 Special Monitoring at Customers' Tap | | | | | |
|---|---|---|---|---|---|
| *Contaminant* | *Units* | *MCLG* | *MCL* | *Detected* | |
| Sodium | ppm | na | na | none | Erosion of natural deposits |

The MDEQ now requires reporting sodium even if it was not detected.

**We invite public participation in decisions that affect drinking water quality.**

The Detroit Board of Water Commissioners holds regular, public meetings at 2pm on the 4th Wednesday each month at 735 Randolph Street in Detroit. You may call 313.224.4800 for information and to confirm meeting dates and times. For more information about your water, or the contents of this report, contact Troy Department of Public Works at 248.524.3370.

For more information about safe drinking water, visit the US Environmental Protection Agency at www.epa.gov/safewater/.

- Unregulated contaminants are those for which EPA has not established drinking water standards. These are monitored to assist EPA in determining the occurrence of unregulated contaminants and whether future regulation is warranted. The MCL is set for the total or sum of these individual components.
- Monitoring and Reporting Requirements: The State and EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2002.
- **TOC Removal:** The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set by the state.

*As part of the 1996 Amendments to the Federal Safe Drinking Water Act, the Consumer Confidence Report (CCR) Rule became effective September 1998. The CCR Rule requires all community water systems in the United States to prepare an annual water quality report and deliver it to all the water system's customers. The CCR Rule was published in the Federal Register on August 19, 1998 and can be found at the US Environmental Protection Agency's (EPA) website: www.epa.gov/epahome/rules.html*